



Motherboard Logo Program (MLP)

# Intel® Desktop Board D945GSEJT

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## MLP Report

10/7/2009

**Purpose:**

This report describes the D945GSEJT Motherboard Logo Program testing run conducted by Intel Corporation.

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# Introduction

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## Terms and Definitions

Term	Definitions
WHQL	Windows* Hardware Qualification Lab
WLK	Windows Logo Kits
MLP	Motherboard Logo Program. For further information see: <a href="http://www.microsoft.com/whdc/hwtest/default.msp">http://www.microsoft.com/whdc/hwtest/default.msp</a>
AP Machine	Audio Precision Machine
Winqual	Windows Qualification
MSFT Tested Product List	Tested Products List. You can view the Windows Marketplace for tested products list at: <a href="http://winqual.microsoft.com/HCL/ProductList.aspx?m=v&amp;cid=105&amp;q=s">http://winqual.microsoft.com/HCL/ProductList.aspx?m=v&amp;cid=105&amp;q=s</a>

# Desktop Board Configuration

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## Desktop Board D945GSEJT Final Configuration Report: Completion of MLP

Data in this section reflects system configuration at time of MLP submission.

### Board Information

Product Code <sup>1</sup>	BIOS String/Model	Technologies NOT Logo'd (yet)
D945GSEJT	JT94510H.86A.0035.2009.0730.1902	N/A - all technologies logo'd
<b>Processor</b>		
Speed	1.60GHz	
Family	Intel® Atom™	
Bus Speed	533 MHz	
<b>Motherboard</b>		
Board AA #	E57851	
Board FAB #	400	
* This report applies to the production FAB revision; Please consult your Intel Corporation representative to clarify the motherboard revision you intend to perform logo testing if not the same.		
<b>System Memory</b>		
Speed	Single Channel, DDR2, 667MHz	
Memory Type	SO-DIMM	
Connector Type	SO-DIMM, 200 Pin	
<b>Power Management</b>		
BIOS Default	S3	
<b>Operating System Tested</b>		
	<b>Check Tested</b>	<b>Comments</b>
Windows 7	<input checked="" type="checkbox"/>	Windows 7 Ultimate
Windows Vista	<input type="checkbox"/>	Vista Ultimate with Service Pack 1
Windows Vista Basic	<input checked="" type="checkbox"/>	Vista Basic with Service Pack 1

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<sup>1</sup> These are the product names to enter in the "Submission ID of previously logo'd qualified PC system or server" field during your "System Using a Previously Logo'd Motherboard" submission to Microsoft.

### Onboard Integrated Devices and Driver for Vista 32-bit and 64-bit

Technology	OS	Version	Package version
<b>Chipset Update Utility</b> Intel® Chipset Software Utility	Windows Vista	8.3.0.1018	8.3.0.1018
	Windows Vista 64-bit		
<b>Graphics</b> Intel® Graphics Media Accelerator	Windows Vista	7.15.10.1587	15.8.5.1587
	Windows Vista 64-bit		
<b>Audio</b> Realtek	Windows Vista	6.0.1.5772	5772
	Windows Vista 64-bit		
<b>LAN</b> Realtek	Windows Vista	6.210.1003.2008	6.210
	Windows Vista 64-bit		

### Onboard Integrated Devices and Driver for Windows 7 32-bit and 64-bit

Technology	OS	Version	Package version
<b>Chipset Update Utility</b> Intel® Chipset Software Utility	Windows 7	9.1.1.1015	9.1.1.1015
	Windows 7 64-bit		
<b>Graphics</b> Intel® Graphics Media Accelerator	Windows 7	8.15.10.1867	15.12.75.2.1867
	Windows 7 64-bit		
<b>Audio</b> Realtek	Windows 7	6.0.1.5911	5911
	Windows 7 64-bit		
<b>LAN</b> Realtek	Windows 7	7.3.522.2009	7.003
	Windows 7 64-bit		

### Windows Logo Kits Used (WLK)

Microsoft website: <http://www.microsoft.com/whdc/DevTools/WDK/DTM.msp>

Please check regularly for test kit updates from Microsoft. Please ensure latest filters updated prior to WHQL run.

Operating Systems	Notes	WHQL Testkit
Windows 7 Windows 7 64-bit	<a href="#">WLK1.4 for Windows 7</a>	<a href="#">WLK1.4 for Windows 7</a>
Windows Vista Windows Vista 64-bit	<a href="#">WLK1.4 for Windows Vista</a>	<a href="#">WLK1.4 for Windows Vista</a>

## Errata and Contingencies

Operating System	Falling Test	Expiry Date	ID Number	Type	Error Description
Window 7	Aero Acceptance Test	7/15/2010	1667	Erratum	<p>The Aero Acceptance Test is exposed for Windows 7 Ultra Mobile System Submissions. However, the requirement this test enforces is only required for Desktop, Mobile and All-In-One Windows 7 PC's.</p> <p>This errata covers ANY failures in the AeroAt.exe's test log, as long as the test completes. Note the test should still run to completion and create a log file, this errata would not cover hangs or crashes in the user mode display driver.</p>
Window 7	Class Driver AC3 Test - Win7 (System)	06/01/2010	1890	Erratum	<p>The HD Audio class driver hdaudio.sys exposes AC-3 data ranges on S/PDIF Kernel Streaming pins incorrectly.</p> <p>The compressed AC-3 transport is "stereo", "16-bit", and at the same sample rate as the uncompressed format. As such, AC-3 data ranges are expected to have MaximumChannels = 2, and MinimumBitDepth = MaximumBitDepth = 16.</p> <p>However, the HD Audio class driver sometimes incorrectly exposes a MaximumBitDepth of 24 or even 32.</p>
Window 7	Class Driver Fidelity Test - Win7 (System, Manual)	12/01/2009	1417	Erratum	<p>Fidelity Test includes a "System Activity Test" that verifies audio fidelity is not compromised during system activity.</p> <p>It uses an activity generator called rws.exe (Real World Stress) which has a bug that causes it to hit an access violation. When this happens it exits with return code 0xC0000005, or -1073741819.</p>
Windows 7	<p>1)Class Driver Fidelity Test - Win7 (System, Manual)</p> <p>2)Fidelity Test - Win7 (System, Manual)</p>	12/31/2009	1547	Erratum	<p>Fidelity Test now includes a "Render Power Transition" test. This preview filter covers all errors in this new test of SYSFUND-0050.</p>

Window 7	Class Driver Fidelity Test - Win7 (System, Manual)	12/01/2009	1670	Erratum	<p>EU restrictions place a cap on the output level of headphone jacks at 32 Ohm load; headphones are not allowed to have an electrical output of more than 150 mV at that load.</p> <p>We test headphone jacks at 300 Ohm load; the relationship between the output at 32 Ohms and the output at 320 Ohms depends on the output impedance of the headphone jack.</p> <p>In particular, if a headphone jack meets the EU requirement of <math>X \leq 150</math> mV at 32 Ohms, depending on the output impedance, it could output a huge amount of power at 300 Ohms, or very slightly over X mV. Since we require <math>X \geq 120</math> mV at 32 Ohms, absent knowledge of the output impedance we can only require <math>X \geq 120</math> mV at 300 Ohms.</p> <p>120 mV is -18.42 dBV. Any headphone output level at 32 Ohms that is less than -18.42 dBV is a legitimate failure, even if it is targeted at EU compliance. Any headphone output level greater than 1 Vrms (0.707 Vrms for mobile systems) is a legitimate pass, regardless of EU compliance.</p> <p>This errata covers output level failures for headphone jacks between -18.42 dBV and 1 Vrms/0 dBV (0.707 Vrms/-6.93 dBV for mobile systems)) in accordance with note 6 of the WLP fidelity requirements.</p>
Windows 7	PCI Hardware Compliance Test For Systems	12/31/2009	1029	Erratum	<p>Assertion B576282C-5C66-4253-A275-257F5D49EFEF SSVID register of the Subsystem ID and Subsystem Vendor ID Capability table cannot have a value of 0h .</p> <p>Assertion 4BA8F23A-6BB1-48EE-88D8-ED1A3ECD34B9 SSVID register of the Subsystem ID and Subsystem Vendor ID Capability table must be read-only .</p> <p>Assertion 6B0F606E-DBB3-4B8C-8879-32B302412EB8 SSID register of the Subsystem ID and Subsystem Vendor ID Capability table must be read-only .</p> <p>Assertion 7A5587BC-5646-4DC4-9A5D-22F85AB2204E PCI Express ports and bridges must implement Subsystem ID and Subsystem Vendor ID Capability.</p>
Windows 7	PCI Hardware Compliance Test For Systems	06/01/2010	1543	Erratum	<p>This happens because the PCI Compliance test assumes that if the Data Link Layer Link Active Reporting Capable bit in the Link Capabilities register for a given PCIe port is set then that indicates that the Data Link Layer Link Active bit will also be set. This is an incorrect assumption because the Data Link Layer Link Active bit can be reset when there is no device below the port. This assertion needs to be removed from the PCIHCT. The current architecture of the PCIHCT prevents it from knowing whether devices exist below a bridge/port.</p>
Windows 7	UAA Test - Win7 (System)	12/01/2009	1394	Erratum	<p>UAA Test requires the Traffic Priority bit to be read/write - however there are two specs that apply, and they conflict. One says the bit must be read/write, the other says it must be read-only. Contact has been made with the author of both specs (Intel) but until this point is clarified we cannot fail submissions containing this test failure.</p>



Window 7	Wave Test - Win7 (System)	06/01/2010	1925	Erratum	WaveTest false-fails DEVICE_STATE_DISABLED endpoints like CD In and Stereo Mix.  This is because it only considers DEVICE_STATE_ACTIVE endpoints when attempting to decide whether communications-class requirements should apply.
Window 7	WDDM CCD Test for Forced Projection	06/01/2010	1866	Erratum	The WDDM CCD Test for forced projection test fails due to not recognizing SDTV dongle as a forcible target.
Windows 7	Windows Client System Check For WDDM 1.1 Display Driver Support	12/01/2009	1613	Erratum	The Windows Client System Check for WDDM 1.1 Display Driver Support test will be a preview test until December 9, 2009. At which time the requirement for Graphic drivers to be WDDM1.1 version will be enforced. The test is in both the Device program (Display Adapter and Chipset) and the System kit for Windows 7 logo programs.
Windows 7	Windows Client System Check For WDDM 1.1 Display Driver Support	12/01/2009	1626	Erratum	The Windows Client System Check for WDDM 1.1 Display Driver Support test will be a preview test until December 9, 2009. At which time the requirement for Graphic drivers to be WDDM1.1 version will be enforced. The test is in both the Device program (Display Adapter and Chipset) and the System kit for Windows 7 logo programs.
Windows 7	Windows Client System Check For WDDM 1.1 Display Driver Support	12/01/2009	1732	Erratum	The Windows Client System Check for WDDM 1.1 Display Driver Support test will be a preview test until December 9, 2009. At which time the requirement for Graphic drivers to be WDDM1.1 version will be enforced. The test is in both the Device program (Display Adapter and Chipset) and the System kit for Windows 7 logo programs.

## Test Notes

Operating System	Test	Description
Windows 7 and Vista	BIOS download	Internal: <a href="http://bios.intel.com/downloads/">http://bios.intel.com/downloads/</a> External: <a href="http://www.intel.com/">http://www.intel.com/</a> click on Support and Download
Windows 7 and Vista	BIOS setup	Please make sure the BIOS setting are as below, otherwise use default settings.  System Date and Time: Current date and time Peripheral Configuration: Enable all onboard component (Except CIR) Drive Configuration: Set to IDE Chipset Configuration: Enable HPET ACPI Suspend State: Set to <S3 State> Boot Device Priority: set <Hard Disk Driver> to first  Note: Enhanced Consumer IR (CIR) component is not supported under Windows7.
Windows 7 and Vista filter update	WLK WHQL test	<a href="http://winqual.microsoft.com/member/SubmissionWizard/LegalExemptions/filterupdates.cab">http://winqual.microsoft.com/member/SubmissionWizard/LegalExemptions/filterupdates.cab</a>
Special H/W that use to PASS the test	None	None